



## Davis Wright Tremaine LLP

ANCHORAGE BELLEVUE LOS ANGELES NEW YORK PORTLAND SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, D.C.

CHRISTOPHER A. FEDELI  
DIRECT (202) 973-4274  
chrisfedeli@dwt.com

SUITE 200  
1919 PENNSYLVANIA AVE NW  
WASHINGTON, DC 20006

TEL (202) 973-4200  
FAX (202) 973-4499  
www.dwt.com

August 1, 2007

*VIA ELECTRONIC FILING*

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**Re: Notice of Errata - WC Docket 06-63, EB Docket 06-119**

Dear Ms. Dortch:

On Tuesday, July 31, 2007, NextG Networks, Inc. filed a Request for Partial Stay in the above-referenced proceedings. The Declaration of David Cutrer filed with that Request was missing Attachment 1, which shows equipment specifications. The complete Declaration of David Cutrer with Attachment 1 is enclosed and should replace the previously-submitted Declaration filed yesterday.

This notice is being filed electronically with the Commission. Please contact the undersigned with any questions.

Sincerely,

*s / Chris Fedeli*

Christopher A. Fedeli

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of

Recommendations of the Independent Panel  
Reviewing the Impact of Hurricane Katrina on  
Communications Networks

EB Docket No. 06-119  
WC Docket No. 06-63

**DECLARATION OF DAVID CUTRER**

I, David Cutrer, do hereby state:

1. I am Chief Technology Officer and Co-Founder of NextG Networks, Inc. ("NextG"). NextG is a provider of cutting edge telecommunications services and networks that empower wireless providers to offer more reliable telecommunications services and greater capacity and coverage. This Declaration is being submitted in support of NextG's Petition For Reconsideration and Petition For Stay of the Commission's cell site back up power rule, 47 C.F.R. § 12.2.
2. I hold a Ph.D. and Masters degrees in Electrical Engineering from the University of California at Berkeley, and a Bachelor of Science degree in Electrical Engineering and Applied Physics from the California Institute of Technology.
3. Prior to co-founding NextG, I was co-founder, Chief Technology Officer, and Vice President of Engineering for LGC Wireless, Inc. I have been involved in the telecommunications industry, and particularly the wireless telecommunications industry, for over 10 years. Through my academic and employment experience, I have over 12 years of experience

with the design, construction, and operation of both wireline and wireless telecommunications systems.

4. In my role at NextG, I am intimately familiar with the technical and economic aspects of NextG's network and provision of telecommunications services.

5. Wireless telecommunications networks and service offerings have experienced tremendous growth in the past 10 years. During this time, wireless service providers have attempted to meet increased demand by building more wireless antenna "sites" that are traditionally mounted to either towers or rooftops of tall buildings in metro areas. The need for these cellular sites is growing at a rate outpacing the ability of the industry to supply it. While in 2001 there were roughly 120,000 cellular sites in the U.S. for all the carriers, the industry was expected to require more than 200,000 sites in 2005. The traditional solution to this problem is to continue to build out cellular sites using the historic model. That is, find a location that can handle a full complement of cell site equipment, resolve zoning issues, acquire the real estate, and then build the site. Despite the real construction challenges of building such a site, they are dwarfed by the real estate and zoning difficulties. Each location requires 200 square feet of real estate and the placement of a large set of antennas, an often even greater challenge. The difficulty in finding suitable locations for these sites is one of the root causes of the site deficit.

6. As a result, wireless service quality continues to suffer on many fronts including poor coverage ('dead spots'), blocked calls, and low bandwidth making many potential data applications infeasible. As wireless customers have become more dependent on their phones, they have also become more demanding of network quality of service.

7. NextG Networks has invented and developed a new telecommunication service offering based on using fiber-optic cable and small antennas mounted in the public rights-of-way (ROW), on infrastructure such as lamp posts and utility poles. Using this fiber network and ROW infrastructure, NextG Networks has effectively “split” a traditional cell site, keeping only the necessary pieces in the remote antenna location, and allowing the rest of the cell site equipment to be placed in a centralized facility.

8. NextG provides its telecommunications service by receiving communications signals that its customer hands off to NextG and then transporting those signals over its fiber optic facilities. This handoff and transport takes place at and through equipment configurations called “Nodes” that are located on utility or streetlight poles located in the public rights-of-way or in private utility easements. The equipment comprising a typical “Node” in NextG’s network includes a small, low-power antenna, laser and amplifier equipment for the conversion of radio frequency signals (“RF”) to optical signals (or from optical to RF), fiber optic lines, and associated equipment such as power supplies, all of which are operated, controlled, managed, or maintained by NextG.

9. Upon handoff from its customer, NextG converts RF signal to light waves and transports the communications through NextG’s fiber optic network to a distant point that is typically, but not always, an aggregation point for NextG’s communications called a “Base Station” or “Hub.” The Hub is a central location that contains such equipment as routers, switches, and signal conversion equipment. The Hub is typically installed in a building located on private property. NextG converts light waves back to RF signals and hands the

communication signals back to its customer at the Hub, where the communications signals are received by the customer's network.

10. NextG's Nodes are currently powered using commercial power in one of three ways. In the case of Nodes on utility poles, NextG obtains commercial power from a secondary drop. This power can either be a metered service (with a meter installed on the pole or a pedestal), or with some utilities we have an agreement for "unmetered" service. In the case of streetlights, NextG connects power directly to the commercial power at the pole. Finally, in some cases, NextG uses a low AC voltage feed to a Node from a remote supply power distribution point (up to approximately 1 mile). Any NextG network elements at the Node location are powered as described above. The NextG hub is either powered from the Operator's power plant, or we install our own commercial power service at the hub. If any one of the Nodes loses power, the NextG network operations center will receive notification of the power outage, open a trouble ticket, and immediately contact our carrier customer. Depending on the agreement between NextG and the customer, NextG may undertake to promptly remedy the outage.

11. Nodes only cover small geographic areas, so if power is lost only a small area is affected. A typical Node covers between 0.1 and 0.2 square miles depending on design requirements and the characteristics of the area covered. A large percentage of NextG's Nodes are located in areas that also receive coverage from some other source (such as macro cells/towers). The NextG DAS solution is used either to provide coverage where towers have traditionally been unable to do so (in so called "dead spots" or "shadow" areas), or is used to enhance capacity. In the "coverage" application, there would typically not be strong coverage

from surrounding macro cells. However, only in very rare cases would there be no coverage whatsoever, and in those cases, the wireless user would likely be able to receive a signal just a short distance away, once they were out of the "shadow" or "dead spot." In the "capacity" type application, there is often good complementary coverage from the macro network.


12. A very limited amount of back up power is currently deployed by NextG at its Nodes. More than 50% of NextG's Node sites do not currently have any form of back up power, and of those Nodes that do have some back up power, they typically have a 1-hour battery back-up solution installed. At the hubs, the majority of NextG's hub racks are powered with DC power from the operator's power plant, which at a minimum has battery back up and in many cases has generator back up. In a few systems, NextG runs its hub racks from AC power, but NextG uses commercial UPC units to provide back up for the host racks.

13. None of NextG's currently installed Nodes or Nodes that are have been engineered and are in the process of installation have eight hour back up at the Node.

14. NextG's current understanding is that in order to provide back up full power for eight hours at its DAS Nodes, the most practical solution possible would be batteries. However, in order to provide back up for 8 hours at full power, the equipment enclosure box would be approximately four and a half feet high and would weigh approximately 350 pounds. Attached to my Declaration as Attachment 1 are copies of equipment specifications for the Novus Alpha Micro XL3 equipment cabinet and the Alpha "AlphaCell GXL" battery. To provide 8 hours of full power would require four of the 88 Amp-Hour GXL180 batteries, which would require the Alpha Micro XL3 cabinet.

15. Assume that it even could overcome local legal, regulatory and practical barriers and pole attachment barriers, the total cost for NextG to retro-fit all of its Nodes to comply with an eight hour backup power requirement would be at least \$25,000 per Node. NextG's ICB customer agreements do not provide for such back up power and the pricing is not designed to recover such a cost. Thus, NextG would also need to obtain the agreement of its customers to the additional cost.

I declare under penalty of perjury that the statements contained in this Declaration are true and correct.

  
\_\_\_\_\_  
David Cutrer

Dated July 30, 2007

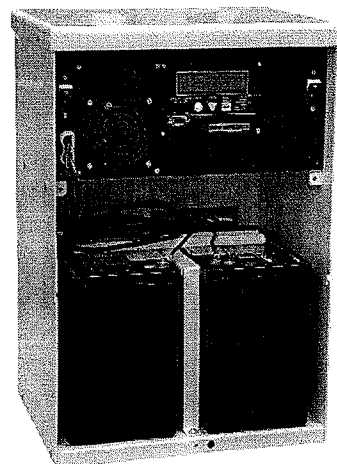


## Attachment 1

# Power

## Novus Micro Series

Outdoor UPS System



Novus Micro with  
optional LCD Display

- > Clean, uninterruptible backup power guarantees your system will remain up and running during power outages
- > Wide range Automatic Voltage Regulation without going to batteries extends battery life, even during periods of surge or sag in voltage from utility power.
- > External communications via RS-232 port or (optional) SNMP Ethernet interface provides local or remote monitoring control
- > Six independently programmable control and report relays allow tracking and controlling of key functions<sup>1</sup>
- > User-friendly LCD display allows "at-a-glance" monitoring and troubleshooting<sup>2</sup> (default on 1000)
- > Event and alarm logging with time and date stamping simplifies and accelerates troubleshooting
- > A wide operating temperature range of -40 to 50°C (-40 to 122°F)<sup>3</sup> is suitable for the most extreme operating environments
- > Temperature compensated battery charging protects batteries from over charging at extreme temperatures

The Novus Micro Series provides constant, reliable backup power for Access Control, Security Public Utility and Telecommunications applications in a compact all-in-one enclosure. The Novus Micro UPS Series provides the same functionality as the Novus FXM Series, for lower power applications in a single, easy to install cabinet. Optional add-on battery cabinets support applications where longer backup times are required. Each power level is available in either North American (120V/60Hz) or International (230V/50Hz) variants.

<sup>1</sup>This feature is available on the Novus Micro 1000 Model only.

<sup>2</sup>This feature is optional for the Novus Micro 300 model.

<sup>3</sup>This applies to the UPS module only. Batteries may require a heater mat at lower temperatures.



## Novus Micro Series

### Nominal Specifications

Power Module:	Novus Micro 300		Novus Micro 1000	
	North America	International	North America	International
Nominal Voltage:	120VAC	230VAC	120VAC	230VAC
Nominal Frequency:	60Hz	50Hz	60Hz	50Hz
Input Current:	5.4A	2.8A	14A	7.3A
Output Current:	2.5A	1.3A	8.3A	4.3A
Output Power at 50°C:	300W/VA	300W/VA	1000W/VA	1000W/VA
Battery String Voltage:	24VDC	48VDC	48VDC	48VDC

\* Consult your Alpha Sales Representative for lead

### General Specifications

#### Performance

Input Voltage Range (120VAC):	85 to 175VAC w/o going to batteries
Input Voltage Range (230VAC):	150 to 328VAC w/o going to batteries
Output Voltage Regulation:	±10% over full input voltage range
Output Voltage Waveform:	Pure sine wave
Typical Efficiency (full resistive load):	>92% (line mode)
Typical Output Voltage THD:	<3%
Typical Transfer Time:	<5ms
Audible Noise @ 1m:	45dBA

### Standard Features

Hot-swappable batteries  
Novus User Software: Windows™-based communication software  
External user input: self test, alarm and EPO (Micro 1000)  
Wall, pole, or pedestal mountable (XL and XL<sub>2</sub>)  
Automatic Voltage Regulation (AVR)  
User adjustable charger (3A, 6A, 10A)  
Programmable dry contact relays (NC & NO)  
Reverse battery polarity protection

### Environmental Specifications

Operating Temperature:	-40 to 50°C
Storage Temperature:	-40 to 75°C
Altitude (ft/m)*:	12,000/3658

\* De-rate 2°C per 1000ft (305m) above 4500ft (1370m)

### Mechanical Specifications

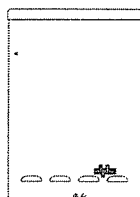
Novus Micro	Micro	Micro XL	Micro XL3
Width (in/mm):	14.1/358	14.1/358	14.1/358
Height (in/mm):	19.67/499.6	30.57/776.5	52.37/1330.2
Depth (in/mm):	11.56/293.6	11.56/293.6	11.56/293.6
Weight (lb/kg)*			
Novus Micro 300:	44/20	50/23	70/32
Novus Micro 1000:	47/21	52/24	62/28

\* Stated weight does not include batteries.

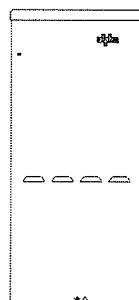
### Battery Runtimes\*

	Novus Micro	Novus Micro XL	Novus Micro XL3
300 W	2x50Ah Batteries 2 hrs 12 mins	2x109Ah Batteries 5hrs 22 mins	4x109Ah Batteries 11hrs 45mins
	4x18Ah Batteries 26 mins	4x50Ah Batteries 1 hr 27 mins	4x109Ah Batteries 3hrs 36 mins

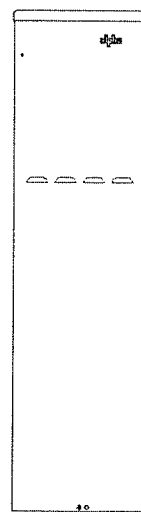
\* Battery runtime depends upon the loads, the battery and the operating temperature. Other battery options are available. Contact Alpha for more information and specifications.



Novus Micro



Novus Micro XL



Novus Micro XL3

For more information visit [www.alpha.com](http://www.alpha.com)

Alpha Technologies

United States  
Canada

Bellingham, Washington Tel: 360 647 2360 Fax: 360 671 4936  
Burnaby, British Columbia Tel: 604 430 1476 Fax: 604 430 8908

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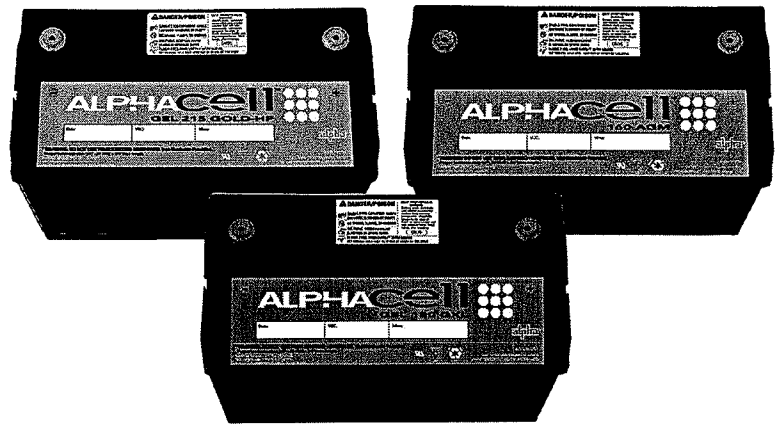
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# Power

## AlphaCell™ GXL

Valve Regulated Lead Acid Batteries



- Batteries designed specifically for standby applications
- All models deliver 100% “out-of-box” capacity — no cycling required
- Premium Gel models offer 50% longer life than traditional gel batteries
- Seven models incorporating four different battery technologies
- Full replacement, non-prorated warranties
- Convenient carrying handle standard on all models

Alpha's standby battery offering includes six different models incorporating four separate battery technologies, ensuring optimal performance for all outdoor powering applications. These batteries provide improved performance, longer runtimes and extended service life.



## AlphaCell GXL

### General Specifications

Model:	Gold HP (215, 190)	Gel GXL (210, 180)	GXL HP (85)	AGM (160)
Warranty <sup>1</sup> :	6 year Full replacement	4 to 5 year Full replacement	5 year Full replacement	1 year Full replacement
Service Life:	Extended	Long	Extended	Average
Runtime (minutes) <sup>2</sup> :	215, 190	210, 180 & 165	85	160
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	High	Extreme	Moderate
Hydrogen Emission:	Low	Low	Low	Low
Terminals:	Threaded Insert 1/4" - 20 UNC	Threaded Insert 1/4" - 20 UNC	Threaded Insert 10-32 UNF	Threaded Insert 1/4" - 20 UNC

### Specifications

Model:	215 Gold HP	210 GXL	190 Gold HP	180 GXL	85 GXL HP	160 AGM
Silver Alloy:	Yes	Yes	Yes	Yes	Yes	No
Typical Runtime (minutes) <sup>2</sup> :	215	210	190	180	85	160
Cells Per Unit:	6	6	6	6	6	6
Voltage Per Unit:	12.8	12.8	12.8	12.8	12.8	12.8
Conductance Value:	1175	1175	1100	1100	600	1300
Max. Discharge Current (A):	900	900	900	900	600	800
Short Circuit Current (A):	2800	2800	2600	2600	2200	3300
10sec Volts @ 100A:	11.4	11.4	11.3	11.3	10.8	11.6
Ohms Impedance 60Hz:	0.0050	0.0050	0.0050	0.0050	0.0065	0.004
Capacity at 20hrs: (to 1.75VPC)	107Ah	106Ah	95Ah	94Ah	50Ah	88Ah
BCI Group Size:	31	31	31	31	22	27
Weight (lb/kg):	72/32.7	72/32.7	66/30	66/30	39.6/18	62/28
Height w/ Terminals (in/mm):	8.48/215.4	9.48/240.8	8.48/215.4	9.48/240.8	8.09/205.6	9.05/229.8
Width (in/mm) <sup>3</sup> :	13.42/340.9	13.42/340.9	13.42/340.9	13.42/340.9	8.99/228.3	12.57/317.8
Depth (in/mm) <sup>3</sup> :	6.80/172.7	6.80/172.7	6.80/172.7	6.80/172.7	5.47/138.9	6.83/173.4
Operating Temperature Range						
Discharge (°C):	-40 to 71°C	-40 to 71°C	-40 to 71°C	-40 to 71°C	-40 to 71°C	-40 to 71°C
Charge (with temp compensation):	-23 to 60°C	-23 to 60°C	-23 to 60°C	-23 to 60°C	-23 to 60°C	-23 to 60°C
Float Charging Voltage (VDC):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Maximum allowed = 4% P-P					

#### Notes:

<sup>1</sup> Warranty varies by country and region. Consult your sales person for details.

<sup>2</sup> Runtimes calculated using a 25A DC constant current load with voltage discharge to 1.75V/cell @ 25°C.

<sup>3</sup> Dimensions at top of battery.

### Current Discharge Ratings Table in Amps (end Voltage 1.75VPC)

Hours	1	2	3	4	6	8	10	12	20	24	48	72	100
215 Gold	67.8	40.5	29.1	22.9	16.1	12.6	10.2	8.7	5.46	4.61	Call*	Call*	Call*
210 GXL	66.3	39.6	28.5	22.4	15.8	12.3	10.0	8.54	5.34	4.51	Call*	Call*	Call*
190 Gold	64.5	37.1	26.6	20.8	14.6	11.4	9.4	7.9	4.96	4.2	2.2	1.5	1.08
180 GXL	61.2	35.2	25.2	19.7	13.9	10.8	8.9	7.5	4.7	4.0	2.1	1.4	1.03
85 GXL HP	33.2	18.8	13.3	10.4	7.34	5.70	4.68	3.97	2.50	2.12	1.11	0.76	0.56

\* Call Alpha for current discharge ratings.

For more information visit [www.alpha.com](http://www.alpha.com)

Alpha Technologies United States Bellingham, Washington Tel: 360 647 2360 Fax: 360 671 4936  
Canada Burnaby, British Columbia Tel: 604 430 1476 Fax: 604 430 8908

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